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EXAMINER

DAY, MICHAEL HENRY

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 09/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/910,542

Applicant(s)
J. Alwan, et al.

Examiner
Michael Day

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 13, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-18, 21-28, and 31-46 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-18, 21-28, and 31-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on Jun 13, 2002 is: a) ☐ approved b) ☒ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

1. Amendment B, filed June 13, 2002, has been entered. The proposed drawing correction to FIG. 1, has been approved by the examiner. The proposed new drawings, i.e., FIG. 3, 4, have been disapproved by the examiner, and are objected to for containing new matter, as described below in reference to the subject present amendment to the specification.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the an antireflection coating or light blocking layer *within* the cap layer must be shown or the feature canceled from the claims. No new matter should be entered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

✓3. The first line of the specification should be amended to give the present status of the parent application, i.e., now abandoned.

✓4. The abstract should be amended to encompass the presently claimed invention.

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5. The amendment filed June 13, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The specification as originally filed does not support a cap layer including two sections, that is, an antireflection coating or light blocking layer disposed on the cap layer. The specification, as originally filed supports "an antireflection coating or light blocking layer within the cap layer." See page 6, line 25 through page 7, line 2 of the specification. The specification, as originally filed, provides no other written description or additional showing of the antireflection coating or light blocking layer on top of, or otherwise "on" the claimed cap layer.

Applicant is required to cancel the new matter in the reply to this Office Action.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 11-18, 21-28, and 31-46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The specification, as originally filed, does not

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provides support for the invention as now claimed. The specification, as originally filed, does not provides support for the anti-reflection coating or light blocking layer included with the cap layer, as recited in amended claims 11, 21, 31, and 39. The specification, as originally filed, provides support for an antireflection coating or light blocking layer within the cap layer, and does not reasonably provide enablement for an antireflection coating or light blocking layer included with the cap layer. See page 6, line 25 through page 7, line 2 of the specification. An antireflection coating included with the cap layer could be interpreted as including an antireflection coating on the cap layer, or under the cap layer. Claims 12-18, 22-28, 32-38, and 39-46 are rejected for depending from a rejected claim.

8. Claims 18, 28, 38, and 46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Referring to page 6, lines 22-24, and to claims 18, 28, 38, and 46, the specification does not disclose any of the particulars as to how to leach sodium from a glass substrate. The plain meaning of the word, "leach" is "to remove soluble constituents from by the action of a percolating liquid." As glass is vitreous, it is unknown as to how any liquid could percolate through a glass substrate so as to leach sodium. Furthermore, the specification fails to disclose what material(s) can be used to leach sodium from glass. Consequently, it is the position of the

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Examiner that the specification fails to teach how to leach sodium from a substrate without undue experimentation.

Oath/Declaration

9. This application presents a claim for subject matter not originally claimed or embraced in the statement of the invention. See the rejection of claims 11-18, 21-28, and 31-46 under 35 U.S.C. 112, first paragraph, above. A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02. Note also that the application should be redesignated as a continuation-in-part. See MPEP §§ 602.05(a).

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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11. Claims 11, 13, 15, 17, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, and 45 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Leroux et al.

Referring to claims 11, 21, 31, and 39, Leroux et al. disclose a cathode substrate including a substrate 2 (see FIG. 6), a cap layer (silica layer 4), an anti-reflective coating (see col. 5, lines 49, 50, underlayers 52), and an array of emitter tips 12.

Referring to claims 13, 23, 33, and 41, it is noted that the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Claims 15, 25, 35, and 43 are rejected for the same reason as claims 11, 21, 31, and 39.

Claims 17, 27, 37, and 45 are rejected for the same reason as claims 11, 21, 31, and 39.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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13. Claims 12, 14, 16, 22, 24, 26, 32, 34, 36, 40, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux et al.

Referring to claims 12, 22, 32, and 40, Leroux et al. disclose a cathode substrate as recited in claims 11, 21, 31, and 39 including a substrate 2 made of glass. See col. 1, lines 41-45. Leroux et al. do not disclose a cathode substrate wherein the substrate 2 made of soda-lime glass. The selection of known materials for a known purpose is generally considered to be within the skill of the art. It would have been obvious to use soda-lime glass, for the substrate 2, as disclosed by Leroux et al., because the selection of known materials for a known purpose is generally considered to be within the skill of the art.

Referring to claims 14, 24, 34, and 42, Leroux et al. disclose a cathode substrate as recited in claims 11, 21, 31, and 39 including a cap layer 4. Leroux et al. are silent as to the thickness of the cap layer 4. The specification of a suitable thickness is within the skill of the art. It would have been obvious to specify a suitable thickness for the cap layer 4, because changes in size are generally considered to be within the skill of the art.

Claims 16, 26, 36, and 44 are rejected for the same reason as claims 12, 22, 32, and 40.

Response to Arguments

14. Applicant's arguments filed June 13, 2002 have been fully considered but they are not persuasive.

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Referring to page 5, the applicant alleges that the claims have been amended, per the examiner's suggestion, so as to overcome the rejections under 35 U.S.C. 112, first paragraph. The examiner respectfully disagrees. The examiner has consistently suggested that the specification, as originally filed, provides support for an antireflection coating or light blocking layer within the cap layer. See page 6, line 25 through page 7, line 2 of the specification.

Referring to page 6, the applicant alleges that U.S. patent 5,444,001, provide evidence that one skilled in the art would have known how to leach sodium from a glass substrate. The examiner respectfully disagrees, and notes that the subject term, leaching, is not found in U.S. patent 5,444,001. Furthermore, U.S. patent 5,444,001 discloses removing contaminates through selective etching at col. 5, lines 59-64, however, the disclosure is not consistent with U.S. patent 6,063,690, wherein at col. 5, lines 48-52, leaching is described as performed in a steam ambient.

Referring to page 7, the applicant alleges that the cap layer (silica layer 4) as disclosed by Leroux et al. is optional, and thus, claims 11, 13, 15, 17, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, and 45 are not anticipated by Leroux et al. The examiner respectfully disagrees. Whether or not the silica layer 4 is optional is not germane to the issue of anticipation. The fact remains that the subject claims read on FIG. 6, as disclosed by Leroux et al.

Still referring to page 7, the applicant alleges that there is no suggestion by Leroux et al. that the substrate could be soda-lime. The examiner respectfully disagrees. A silica layer 4 on a glass substrate 2, as disclosed by Leroux et al., is conventionally used to prevent sodium diffusion, as evidenced by Lee et al. (see FIG. 3, and col. 7, lines 8-17), and Kanicki, (page

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119, section 3.5.3.1). Consequently, the mere fact that Leroux et al. disclose a silica layer would have suggested to one skilled in the art the use of an inexpensive substrate, such as, a soda-lime glass substrate.

The arguments of pages 8 and 9 are not persuasive for reasons of record.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Day whose telephone number is 703/305-4941. The examiner can normally be reached on Monday-Friday, from 8:00 A.M. to 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel, can be reached by phoning 703/305-4794. The Fax phone number is 703/308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703/308-0956.

September 17, 2002


MICHAEL DAY
PRIMARY EXAMINER
GROUP 2870